MB SERIES

Revision nr. 13

Dated 25/05/2017

Printed on 05/06/2017

Page n. 1/18

Safety data sheet

SECTION 1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name

MB SERIES INK

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use Pad printing ink.

1.3. Details of the supplier of the safety data sheet

Full address
District and Country

INKCUPS CORPORATION 310 ANDOVER ST. DANVERS, MA 01945 USA

Tel. 978-646-8980

e-mail address of the competent person

responsible for the Safety Data Sheet

compliance@inkcups.com

Product distribution by: INKCUPS CORP.

1.4. Emergency telephone number

For urgent inquiries refer to

1.800.424.9300

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Flammable liquid, category 3 H226 Flammable liquid and vapour.
Acute toxicity, category 4 H302 Harmful if swallowed.
Serious eye damage, category 1 H318 Causes serious eye damage.

Hazardous to the aquatic environment, chronic toxicity, H412 Harmful to aquatic life with long lasting effects.

category 3

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:







MB SERIES

Revision nr. 13

Dated 25/05/2017

Printed on 05/06/2017

Page n. 2/18

Signal words: Danger

Hazard statements:

H226 Flammable liquid and vapour. H302 Harmful if swallowed. H318

Causes serious eye damage.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P273 Avoid release to the environment.

P280 Wear protective gloves / eye protection / face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue

rinsina.

Immediately call a POISON CENTER or a doctor. P310

P370+P378 In case of fire: use chemical powder, CO2 or dry send to extinguish.

Contains: CYCLOHEXANONE

BUTYLGLYCOL ACETATE

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

SECTION 3. Composition/information on ingredients

3.1. Substances

Information not relevant

3.2. Mixtures

Contains:

The full wording of hazard (H) phrases is given in section 16 of the sheet.

Identification x = Conc. % Classification 1272/2008 (CLP)

2-METHOXY-1-METHYLETHYL ACETATE

CAS 108-65-6 $21 \le x < 22,5$ Flam. Liq. 3 H226

EC 203-603-9 INDEX 607-195-00-7

Reg. no. 01-2119475791-29-xxxx

BUTYLGLYCOL ACETATE

CAS 112-07-2 $19,5 \le x < 21$ Acute Tox. 4 H302, Acute

Tox. 4 H312, Acute Tox. 4

H332

EC 203-933-3

INDEX 607-038-00-2

Reg. no. 01-2119475112-47xxxx

MB SERIES

Revision nr. 13

Dated 25/05/2017

Printed on 05/06/2017

Page n. 3/18

CYCLOHEXANONE

CAS 108-94-1

 $4,5 \le x < 5$

Flam. Liq. 3 H226, Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Eye Dam. 1 H318, Skin Irrit. 2 H315

EC 203-631-1

INDEX 606-010-00-7

Reg. no. 01-2119453616-35-xxxx

Hydrocarbons, C10, aromatics, <1% naphtalene

CAS -

 $2.5 \le x < 3$

Asp. Tox. 1 H304, STOT SE 3 H336, Aquatic Chronic 2

H411, EUH066

Chronic 2 H411

EC 918-811-1

INDEX -

Reg. no. 01-2119463583-34-xxxx **4,4'-ISOPROPYLIDENEDIPHENOL**

CAS 80-05-7

 $0 \le x < 0,1$

Repr. 2 H361f, Eye Dam. 1 H318, STOT SE 3 H335, Skin Sens. 1 H317, Aquatic

EC 201-245-8

INDEX 604-030-00-0

Reg. no. 2119457856-23-xxxx

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately. INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

4.2. Most important symptoms and effects, both acute and delayed

Specific information on symptoms and effects caused by the product are unknown.

4.3. Indication of any immediate medical attention and special treatment needed

Information not available

SECTION 5. Firefighting measures

MB SERIES

Revision nr. 13

Dated 25/05/2017

Printed on 05/06/2017

Page n. 4/18

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

Send away individuals who are not suitably equipped. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. If the product is flammable, use explosion-proof equipment. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

MB SERIES

Revision nr. 13

Dated 25/05/2017

Printed on 05/06/2017

Page n. 5/18

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

BGR	България	МИНИСТЕРСТВО НА ТРУДА И СОЦИАЛНАТА ПОЛИТИКА МИНИСТЕРСТВО НА ЗДРАВЕОПАЗВАНЕТО НАРЕДБА No 13 от 30 декември 2003 г
CZE	Česká Republika	Nařízení vlády č. 361/2007 Sb. kterým se stanoví podmínky ochrany zdraví při práci
DEU	Deutschland	MAK-und BAT-Werte-Liste 2012
DNK	Danmark	Graensevaerdier per stoffer og materialer
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GBR	United Kingdom	EH40/2005 Workplace exposure limits
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
POL	Polska	ROZPORZĄDZENIE MINISTRA PRACY I POLITYKI SPOŁECZNEJ z dnia 16 grudnia 2011r
PRT	Portugal	Ministério da Economia e do Emprego Consolida as prescrições mínimas em matéria de protecção dos trabalhadores contra os riscos para a

MB SERIES

Revision nr. 13

Dated 25/05/2017

Printed on 05/06/2017

Page n. 6/18

segurança e a saúde devido à exposição a agentes químicos no trabalho -

Diaro da Republica I 26; 2012-02-06

Occupational Exposure Limit Values, AF 2011:18

TUR Türkiye 2000/39/EC sayılı Direktifin ekidir

EU OEL EU Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC;

Directive 2004/37/EC; Directive 2000/39/EC; Directive 91/322/EEC.

TLV-ACGIH ACGIH 2016

SWE

Sverige

2-METHOXY-1-METHYLET Threshold Limit Value	THYL ACETATI	<u> </u>				
Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	275		550		SKIN
TLV	CZE	270		550		SKIN
AGW	DEU	270	50	270	50	
MAK	DEU	270	50	270	50	
TLV	DNK	275	50			SKIN
VLA	ESP	275	50	550	100	SKIN
VLEP	FRA	275	50	550	100	SKIN
WEL	GBR	274	50	548	100	
VLEP	ITA	275	50	550	100	SKIN
NDS	POL	260		520		
VLE	PRT	275	50	550	100	SKIN
MAK	SWE	250	50	400	75	SKIN
ESD	TUR	275	50	550	100	SKIN
OEL	EU	275	50	550	100	SKIN
Predicted no-effect concentration	on - PNEC					
Normal value in fresh water Normal value in marine water Normal value for fresh water sediment Normal value for marine water sediment Normal value for water, intermittent release Normal value of STP microorganisms Normal value for the terrestrial compartment				0,635 0,0635 3,29 0,329 6,35 100 0,29		mg/l mg/kg mg/l mg/l mg/l mg/kg
Health - Derived no-effect level - DNEL / DMEL						

Health - Derived no-effect level - DNEL / DMEL									
	Effects on consumers				Effects on workers				
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic	
Oral			VND	1,67 mg/kg		·		_	
Inhalation			VND	33 mg/m3			VND	272 mg/m3	
Skin			VND	54,8 mg/kg			VND	153,5 mg/kg	

BUTYLGLYCOL ACETAT	E					
Туре	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	133		333		SKIN
TLV	CZE	130		300		SKIN
AGW	DEU	130	20	520	80	SKIN
MAK	DEU	66	10	132	20	SKIN
TLV	DNK	130	20			SKIN
VLA	ESP	133	20	333	50	SKIN

	l N	KE	UP	S			ion nr. 13 d 25/05/2017	
		MB SERI				Printe	ed on 05/06/2017	
		MID SEKI	LS			Page	n. 7/18	
VLEP	FRA	66,5	10	333	50	SKIN		
WEL	GBR	133	20	332	50	SKIN		
VLEP	ITA	133	20	333	50	SKIN		
NDS	POL	100	20	300	00	Ortin		
/LE	PRT	133	20	333	50	SKIN		
MAK	SWE	70	10	140	20	SKIN		
ESD	TUR	133	20	333	50	SKIN		
OEL .	EU	133	20	333	50	SKIN		
TLV-ACGIH	20	131	20	000	00	Ortil		
Predicted no-effect concentra	tion DNEC	131	20					
Normal value in fresh water Normal value in marine water Normal value for fresh water s Normal value for marine water sommal value for water, interm Normal value of STP microorg Normal value for the food cha Normal value for the terrestria Health - Derived no-effection.	sediment or sediment nittent release ganisms iin (secondary poison al compartment			0,304 0,0304 2,03 0,203 0,56 90 0,06 0,06	Effects on	mg/l mg/l mg/l mg/l mg/l g/kg g/kg		
Route of exposure	consumers Acute local	Acute systemic	Chronic local	Chronic	workers Acute local	Acute	Chronic local	Chronic
Oral	VND		VND	systemic		systemic		systemic
		18 mg/kg/d		4,3 mg/kg/d	222	770/ 0	VAID	100/
nhalation Skin	166 mg/m3	499 mg/m3	VND VND	67 mg/m3 36 mg/kg/d	333 mg/m3 102 mg/kg/d	773 mg/m3 27 mg/kg/d	VND VND	133 mg/m3 102 mg/kg/
Threshold Limit Value Type	Country	TWA/8h		STEL/15min				
		mg/m3	ppm	mg/m3	ppm			
ΓLV	BGR	40,8		81,6		SKIN		
ΓLV	CZE	40		80		SKIN		
AGW	DEU	80	20	80	20	SKIN		
ΓLV	DNK	40	10					
/LA	ESP	41	10	82	20	SKIN		
/LEP	FRA	40,8	10	81,6	20			
WEL	GBR	41	10	82	20	SKIN		
VLEP	ITA	40,8	10	81,6	20	SKIN		
NDS	POL	40		80				
/LE	PRT	40,8	10	81,6	20	SKIN		
MAK	SWE	41	10	81	20	SKIN		
ESD	TUR	40,8	10	81,6	20	SKIN		
OEL	EU	40,8	10	81,6	20	SKIN		
TLV-ACGIH		80	20	201	50			
Predicted no-effect concentra	tion - PNEC							
Normal value in fresh water Normal value in marine water	sediment			0,1 0,01 0,512 0,0512		mg/l mg/l mg/kg mg/kg		
Normal value for fresh water s Normal value for marine wate Normal value for water, intern Normal value of STP microorg Normal value for the terrestric Health - Derived no-effer	nittent release ganisms al compartment	DMEL		1 10 0,0435		mg/l mg/l mg/ko		

INKEUPS

MB SERIES

Revision nr. 13

Dated 25/05/2017

Printed on 05/06/2017

Page n. 8/18

Specimen	Route of exposure	Acute local	Acute systemic	Chronic local	Chronic	Acute local	Acute	Chronic local	Chronic
Audit Derived no-effect Level - DNEL / DME L		7100101000	ricule dyelee		systemic	710410 10041			systemic
Hydrocarbons, C10, aromatics, <1% naphtalene Health - Derived no-effect level - DNEL / DMEL Effects on Souls of exposure Acute local Acute systemic Drai VND 7,5 mg/kg/d Inhibitation VND 11 mg/kg Inhibitation VND 12,5 mg/kg/d Inhibitation VND 130 mg/m3 VND 130 mg/m3 VND 150 mg/m3					=				_
Health - Derived no-effect level - DNEL / DNEL	SKIII			VIND	i ilig/kg			VIND	4 mg/kg/d
Health - Derived no-effect level - DNEL / DNEL	Hydrocarbons, C10, aroma	tics. <1% napht	alene						
Chronic local Chronic local Chronic local Chronic local Chronic local Systemic Systemic Chronic local Chronic local Systemic Systemi		evel - DNEL / DI				F			
Systemic		consumers				workers			
Name	Route of exposure	Acute local	Acute systemic	Chronic local		Acute local		Chronic local	
SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM	Oral			VND	7,5 mg/kg/d				
SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM Health - Derived no-effect level - DNEL / DMEL Effects on consumers Acute local Acute local Acute systemic Chronic local Chronic systemic Oral VND 32 mg/m3 Skin VND 32 mg/m3 Skin VND 11 mg/kg Country TWA/8h James STEL/15min mg/m3 ppm mg/m3 ppm TWA/8h James STEL/15min mg/m3 ppm TWA/8h Ja	Inhalation				· ·				ū
Route of exposure Acute local Acute local Acute systemic Chronic oransumers Acute local Acute local Acute systemic Chronic oxystemic oransumers Acute local Acute local Acute systemic Chronic systemic oxystemic oxyste	Skin			VND	7,5 mg/kg/d			VND	12,5 mg/kg/d
Route of exposure Acute local Acute local Acute systemic Chronic oransumers Acute local Acute local Acute systemic Chronic oxystemic oransumers Acute local Acute local Acute systemic Chronic systemic oxystemic oxyste	COLVENT MARKETIA (RETI		T 4001						
Consumers Acute local Acute systemic Chronic local Chronic systemic Chronic s									
Acute Section Acute Section Acute Section Chronic Chronic Section									
VND	Route of exposure		Acute systemic	Chronic local				Chronic local	
A4-IsoPROPYLIDENEDIPHENOL	Oral			VND			systemic		systemic
### A4-ISOPROPYLIDENEDIPHENOL Threshold Limit Value Country	Inhalation			VND	32 mg/m3			VND	150 mg/m3
Threshold Limit Value Type Country TWA/8h STEL/15min Type	Skin			VND	11 mg/kg			VND	25 mg/kg
Threshold Limit Value Type Country TWA/8h STEL/15min Type									
Type Country TWA/8h STEL/15min mg/m3 ppm p		HENOL							
VLEP	Type	Country	TWA/8h		STEL/15min				
VLEP			mg/m3	ppm	mg/m3	ppm			
NDS	VLA	ESP	10						
NDS POL 5 10 VLE PRT 10 DEL EU 2 INHAL Predicted no-effect concentration - PNEC Normal value in fresh water Normal value in marine water Normal value for STP microrganisms 320 mg/l Normal value for the terrestrial compartment 4 3,7 mg/kg bw/d 10 mg/m 3 5 mg/m3 5 mg/m3 5 mg/m3 0,25 mg/m3 10 mg/m3 10 mg/m3 10 mg/m3 14 mg/kg bw/d 10 mg/m3 14 mg/kg bw/d 15 mg/m3 17 mg/kg bw/d 10 mg/m3 11 mg/m3 14 mg/kg bw/d 10 mg/m3 15 mg/m3 15 mg/m3 15 mg/m3 15 mg/m3 15 mg/m3 17 mg/kg bw/d 10 mg/m3 10	VLEP	FRA	10						
DEL EU 2 Predicted no-effect concentration - PNEC Normal value in fresh water Normal value in marine water Normal value in marine water Normal value in marine water Normal value of STP microorganisms Normal value of STP microorganisms Normal value for the terrestrial compartment Health - Derived no-effect level - DNEL / DMEL Effects on consumers Acute local Acute systemic Chronic local Systemic Systemic Systemic O.05 mg/kg bw/d bw/d bw/d bw/d bw/d bw/d bw/d bw/d	VLEP	ITA	10						
Predicted no-effect concentration - PNEC Normal value in fresh water	NDS	POL	5		10				
Predicted no-effect concentration - PNEC Normal value in fresh water Normal value in marine water Normal value in marine water Normal value of STP microorganisms Sugar Normal value of STP microorganisms Sugar Normal value for the terrestrial compartment Sugar	VLE	PRT	10						
Normal value in fresh water Normal value in marine water Normal value in marine water Normal value of STP microorganisms Normal value for the terrestrial compartment Health - Derived no-effect level - DNEL / DMEL Effects on consumers Consumers Route of exposure Acute local Acute local Acute systemic Chronic local Chronic systemic Systemic Systemic Oral O,55 mg/kg bw/d Inhalation 5 mg/m3 5 mg/m3 5 mg/m3 0,7 mg/kg bw/d 0,7 mg/kg bw/d 0,7 mg/kg bw/d 1,4 m	OEL	EU	2				INHAL		
Normal value in marine water Normal value in marine water Normal value of STP microorganisms 320 mg/l Normal value for the terrestrial compartment 320 mg/kg Health - Derived no-effect level - DNEL / DMEL Effects on consumers		- PNEC							
Normal value for the terrestrial compartment Health - Derived no-effect level - DNEL / DMEL Effects or consumers Route of exposure Acute local Acute systemic Chronic local Chronic systemic Systemic Oral One of mg/kg Drain one of mg/kg	Normal value in fresh water Normal value in marine water								
Health - Derived no-effect level - DNEL / DMEL Effects on consumers Route of exposure Acute local Acute systemic Oral Inhalation 5 mg/m3 0,7 mg/kg bw/d O,7 mg/kg bw/d Acute Inhalable Fraction RESP = Respirable Fraction Effects on workers Acute local Acute of exposure Acute local Acute of exposure O,05 mg/kg bw/d O,05 mg/kg bw/d D,05 mg/kg bw/d D,05 mg/kg bw/d D,07 mg/kg bw/d D,05 mg/kg bw/d D,07 mg/kg bw/d									
Route of exposure Acute local Acute systemic Chronic local Chronic systemic Systemic Systemic Chronic systemic Systemic Chronic systemic		evel - DNEL / DI	MEL		3 ,1	F#	99		
Systemic		consumers				workers			
bw/d bw/d bw/d 10 mg/m3	Route of exposure	Acute local	Acute systemic	Chronic local		Acute local		Chronic local	systemic
Inhalation	Oral								
bw/d bw/d bw/d bw/d bw/d bw/d bw/d bw/d	Inhalation	5 mg/m3	5 mg/m3	5 mg/m3	0,25 mg/m3				
egend: i) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.	Skin		0,7 mg/kg bw/d						
c) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.					21112		211/4		
	Legend:								
	(C) - CEILING INILAL - INI	aalabla Eraatica	. DEQD = Daa	nirable Freeties	· TUODA -	Thoracia Eras	tion		
ND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.	O - OCILINO , INTIAC - IIIIIalable Fraction , INCOL - Nespitable Fraction , ITIONA - ITIONACIO Fraction.								
	VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.								

MB SERIES

Revision nr. 13

Dated 25/05/2017

Printed on 05/06/2017

Page n. 9/18

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

EYE PROTECTION

Wear a hood visor or protective visor combined with airtight goggles (see standard EN 166).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance liquid Colour various

Odour typical of solvent Odour threshold Not available Not available Melting point / freezing point Not available Initial boiling point > 140 °C Boiling range Not available Flash point 23 ≤ T ≤ 60 Evaporation Rate Not available Flammability of solids and gases Not available Lower inflammability limit Not available Upper inflammability limit Not available

MB SERIES

Revision nr. 13

Dated 25/05/2017

Printed on 05/06/2017

Page n. 10/18

Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	Not available
Solubility	Not available
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

9.2. Other information

Information not available

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

2-METHOXY-1-METHYLETHYL ACETATE

Stable in normal conditions of use and storage.

With the air it may slowly develop peroxides that explode with an increase in temperature.

CYCLOHEXANONE

Attacks various types of plastic materials.

May condense under the effect of heat to form resinous compounds.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

2-METHOXY-1-METHYLETHYL ACETATE

May react violently with: oxidising substances, strong acids, alkaline metals.

CYCLOHEXANONE

Risk of explosion on contact with: hydrogen peroxide,nitric acid,heat,mineral acids.May react violently with: oxidising agents.Forms explosive mixtures with: air.

10.4. Conditions to avoid

MB SERIES

Revision nr. 13

Dated 25/05/2017

Printed on 05/06/2017

Page n. 11/18

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

CYCLOHEXANONE

Avoid exposure to: sources of heat,naked flames.

10.5. Incompatible materials

2-METHOXY-1-METHYLETHYL ACETATE

Incompatible with: oxidising substances, strong acids, alkaline metals.

10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on toxicological effects

Hydrocarbons, C10, aromatics, <1% naphtalene Specific target organ toxicity (STOT) - single exposure: NOAEC> 600 mg / kg Inhalation. Rat

Metabolism, toxicokinetics, mechanism of action and other information

2-METHOXY-1-METHYLETHYL ACETATE

The main route of entry is the skin, whereas the respiratory route is less important due to the low vapour pressure of the product.

Information on likely routes of exposure

2-METHOXY-1-METHYLETHYL ACETATE WORKERS: inhalation; contact with the skin.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

2-METHOXY-1-METHYLETHYL ACETATE

Above 100 ppm causes irritation of the eye, nose and oropharynx mucous membranes. At 1000 ppm, disturbance of equilibrium and severe eye irritation can be noticed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and eye irritation with direct contact. No chronic effects on humans have been reported (INCR, 2010).

Interactive effects

Information not available

ACUTE TOXICITY

LC50 (Inhalation) of the mixture:> 20 mg/l

LD50 (Oral) of the mixture:1923 mg/kg

LD50 (Dermal) of the mixture:>2000 mg/kg

MB SERIES

Revision nr. 13

Dated 25/05/2017

Printed on 05/06/2017

Page n. 12/18

Hydrocarbons, C10, aromatics, <1% naphtalene 6318 mg/kg Ratto / Rat LD50 (Oral) > 2000 mg/kg Coniglio / Rabbit LD50 (Dermal) > 4688 mg/kg/4h Ratto / Rat LC50 (Inhalation)

4,4'-Isopropylidenediphenol-Epichlorohydrin Copolymer > 2000 mg/kg Ratto / Rat LD50 (Oral) > 2000 mg/kg Ratto / Rat LD50 (Dermal)

2-METHOXY-1-METHYLETHYL ACETATE 8530 mg/kg Rat LD50 (Oral) > 5000 mg/kg Rat LD50 (Dermal) > 4345 ppm/6h Ratto / Rat LC50 (Inhalation)

CYCLOHEXANONE
1535 mg/kg Ratto / Rat
LD50 (Oral)
1100 mg/kg Coniglio / Rabbit
LD50 (Dermal)
11 mg/l/4h Ratto / Rat (4h)
LC50 (Inhalation)

BUTYLGLYCOL ACETATE 2000 mg/kg Ratto / Rat LD50 (Oral) 2000 mg/kg Coniglio / Rabbit LD50 (Dermal)

4,4'-ISOPROPYLIDENEDIPHENOL > 2000 mg/kg Rat LD50 (Oral) 3000 mg/kg Rabbit LD50 (Dermal)

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class CARCINOGENICITY

Does not meet the classification criteria for this hazard class REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

SECTION 12. Ecological information

MB SERIES

Revision nr. 13

Dated 25/05/2017 Printed on 05/06/2017

Page n. 13/18

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity

Hydrocarbons, C10, aromatics, <1% naphtalene

LC50 - for Fish > 2 mg/l/96h

EC50 - for Crustacea > 3 mg/l/48h Daphnia magna

EC50 - for Algae / Aquatic > 1 mg/l/72h

2-METHOXY-1-

METHYLETHYL ACETATE

LC50 - for Fish 134 mg/l/96h Pesce, Oncorhynchus mykiss OECD 203

> 500 mg/l/48h Daphnia magna EC50 - for Crustacea

EC50 - for Algae / Aquatic > 1000 mg/l/72h Selenastrum capricornutum OECD 201

Chronic NOEC for Fish 47,5 mg/l Oryzias latipes 14 gg OECD 204 Chronic NOEC for Crustacea 100 mg/l Dapnia magna 21 gg OECD 202

CYCLOHEXANONE

EC50 - for Crustacea 527 mg/l/96h Fish, Pimephales promelas (96h) EC50 - for Algae / Aquatic > 100 mg/l/72h Scenedesmus subspicatus

Plants

BUTYLGLYCOL ACETATE

LC50 - for Fish > 10 mg/l/96h Fish 10-100 mg/kg (48h) EC50 - for Crustacea > 100 mg/l/48h Daphnia Magna (24h) EC50 - for Algae / Aquatic > 100 mg/l/72h Scenedesmus subspicatus

Plants

ISOPROPYLIDENEDIPHEN

LC50 - for Fish 9,4 mg/l/96h Menidia menidia EC50 - for Crustacea 10,2 mg/l/48h Daphnia magna

12.2. Persistence and degradability

Hydrocarbons, C10, aromatics, <1% naphtalene

immiscibile in H2O mg/l Solubility in water

Rapidly degradable

2-METHOXY-1-

METHYLETHYL ACETATE

> 10000 mg/l Solubility in water

Rapidly degradable

CYCLOHEXANONE

MB SERIES

Revision nr. 13

Dated 25/05/2017

Printed on 05/06/2017

Page n. 14/18

Solubility in water

0,1 - 100 mg/l

Rapidly degradable

BUTYLGLYCOL ACETATE

Rapidly degradable

4,4'-

ISOPROPYLIDENEDIPHEN

OL

Solubility in water 301 mg/l

Rapidly degradable

12.3. Bioaccumulative potential

2-METHOXY-1-

METHYLETHYL ACETATE

Partition coefficient: n- 1,2

octanol/water

CYCLOHEXANONE

Partition coefficient: n- 0,86

octanol/water

BUTYLGLYCOL ACETATE

Partition coefficient: n- 1,51

octanol/water

4,4'-

ISOPROPYLIDENEDIPHEN

OL

Partition coefficient: n- 3,4

octanol/water

12.4. Mobility in soil

CYCLOHEXANONE

Partition coefficient: 1,18

soil/water

4,4'-

ISOPROPYLIDENEDIPHEN

OL

Partition coefficient: 2,95

soil/water

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects

Revision nr. 13

Dated 25/05/2017

Printed on 05/06/2017

Page n. 15/18

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

14.1. UN number

ADR / RID, IMDG,

1210

IATA:

14.2. UN proper shipping name

ADR / RID: PRINTING INK or

PRINTING INK RELATED

MATERIAL

IMDG: PRINTING INK or

PRINTING INK

RELATED MATERIAL

IATA:

PRINTING INK or PRINTING INK **RELATED**

MATERIAL

14.3. Transport hazard class(es)

ADR / RID: Class: 3 Label: 3

IMDG: Class: 3 Label: 3

IATA: Label: 3 Class: 3



14.4. Packing group

ADR / RID, IMDG, IATA:

Ш

14.5. Environmental hazards

ADR / RID: NO

MB SERIES

Revision nr. 13 Dated 25/05/2017 Printed on 05/06/2017

Page n. 16/18

IMDG: NO IATA: NO

14.6. Special precautions for user

ADR / RID: HIN - Kemler: 30 Limited Tunnel Quantities: 5

restriction code: (D/E)

Special Provision: -IMDG: EMS: F-E, S-D Limited

Quantities: 5

Cargo:

Pass.:

Maximum

quantity: 220

instructions: 366

Maximum Packaging quantity: 60 L instructions:

355

Packaging

Special Instructions:

A3, A72, A192

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Information not relevant

SECTION 15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Seveso Category - Directive 2012/18/EC: P5c

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product

IATA:

3 - 40 Point

Contained substance

Point 66

ISOPROPYLIDENED IPHENOL Reg. no.: 2119457856-23-xxxx

Substances in Candidate List (Art. 59 REACH)

4,4'-ISOPROPYLIDENEDIPHENOL

Reg. no.: 2119457856-23-xxxx

Substances subject to authorisarion (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

MB SERIES

Revision nr. 13

Dated 25/05/2017

Printed on 05/06/2017

Page n. 17/18

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment

No chemical safety assessment has been processed for the mixture and the substances it contains.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Liq. 3 Flammable liquid, category 3

Repr. 2 Reproductive toxicity, category 2

Acute Tox. 4 Acute toxicity, category 4

Asp. Tox. 1 Aspiration hazard, category 1

Eye Dam. 1 Serious eye damage, category 1

Skin Irrit. 2 Skin irritation, category 2

STOT SE 3 Specific target organ toxicity - single exposure, category 3

Skin Sens. 1 Skin sensitization, category 1

Aquatic Chronic 2 Hazardous to the aquatic environment, chronic toxicity, category 2

Aquatic Chronic 3 Hazardous to the aquatic environment, chronic toxicity, category 3

H226 Flammable liquid and vapour.H361f Suspected of damaging fertility.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H332 Harmful if inhaled.

H304 May be fatal if swallowed and enters airways.

H318 Causes serious eye damage.

H315 Causes skin irritation.

H335 May cause respiratory irritation.
 H317 May cause an allergic skin reaction.
 H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

EUH066 Repeated exposure may cause skin dryness or cracking.

MB SERIES

Revision nr. 13

Dated 25/05/2017

Printed on 05/06/2017

Page n. 18/18

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- · WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

- 1. Regulation (EU) 1907/2006 (REACH) of the European Parliament
- 2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
- 3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
- 4. Regulation (EU) 2015/830 of the European Parliament
- 5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament 6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
- 7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
- 8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament 9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
- 10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
- 11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament The Merck Index. 10th Edition
- Handling Chemical Safety
- INRS Fiche Toxicologique (toxicological sheet)
- Patty Industrial Hygiene and Toxicology
- N.I. Sax Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals Ministry of Health and ISS (Istituto Superiore di Sanità) Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

Changes to previous review:

The following sections were modified:

08 / 11 / 12 / 14.